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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.            | CONFIRMATION NO.       |
|--|-------------|----------------------|--------------------------------|------------------------|
| 10/552,097   | 02/21/2006  | Leung Choi Chow      | 2733.35US01                    | 4192                   |
| 24113 7590 09/24/2007<br>PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A.<br>4800 IDS CENTER<br>80 SOUTH 8TH STREET<br>MINNEAPOLIS, MN 55402-2100 |             |                      | EXAMINER<br>MICHENER, JOSHUA J |                        |
|  |             |                      | ART UNIT<br>3644               | PAPER NUMBER           |
|  |             |                      | MAIL DATE<br>09/24/2007        | DELIVERY MODE<br>PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                    |              |  |
|------------------------------|--------------------|--------------|--|
| <b>Office Action Summary</b> | Application No.    | Applicant(s) |  |
|                              | 10/552,097         | CHOW ET AL.  |  |
|                              | Examiner           | Art Unit     |  |
|                              | Joshua J. Michener | 3644         |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 15-31 is/are pending in the application.
- 4a) Of the above claim(s) 19,21,22,24-26 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-18,20,23 and 27-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/21/06</u>   | 6) <input type="checkbox"/> Other: _____                          |

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## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Answer to Election/Restrictions*

2. Applicant's election of Species II drawn to claims 15 – 18, 20, 23, and 27 - 30 in the reply filed on 7/2/07 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

3. Claims 19, 21, 22, 24 – 26, and 31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. It is noted, Applicant pointed out claim 28 appears to be part of Species II, the Examiner agrees. Claim 31 should have been grouped into Species III since it is dependent from Species III claim 24 and is thus withdrawn.

The requirement is deemed proper and therefore made FINAL.

### *Drawings*

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “**multiplicity of flexible elements extending radial across the junction**” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing

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sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Objections***

5. Claim 30 is objected to because of the following informalities: Claim 30 depends from claim 39, it appears it should be - -claim 29 - -. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 15 – 18, 20, 23, and 27 – 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claims 15, 20, 23 and 28 are replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively

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specified. The structure must be organized and correlated in such a manner as to present a complete operative device.

8. Claim 15 recites the “the surface” “the surfaces”, “the gap” in lines 3, 4, 5, and 7. There is insufficient antecedent basis for this limitation in the claim. It is unclear what surface(s) Applicant is referring.

9. Claim 23 recites the limitations “the surface” and “the surfaces”. There is insufficient antecedent basis for this limitation in the claim

10. Claim 28 recites the limitations “the surface” and “the surfaces” in lines 2, 4, and 5. There is insufficient antecedent basis for this limitation in the claim

11. Claim 29 appears to be claiming a method of operating and aircraft coupled to a step of manufacturing. How it is unclear what method Applicant intends to claim. The claim construction appears to make the claim indefinite.

12. Claims 16– 18, 20, 23, 27, 29, and 30 are rejected as being dependent from a rejected base claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 15 – 18, 20, 23, 28, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Fletcher et al. (US 3,187,797).**

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13. Regarding claims 15, 20, 23, 28, 29, and 30, as best understood, Fletcher et al. discloses an aircraft (col 1, lines 10 – 25) with retractable landing gear (col 2, lines 36 - 44) with tires and rims (figures 1, 2, and 5 – 7) wherein a region exists between a junction between the tire and rim wherein the region has is shaped and smoothly interfaces with the surfaces of the junction between the tire and rim wherein the apparatus as claimed is capable of performing the intended use. It is noted, the method is inherent to the apparatus as claimed. It should be appreciated that the applicant's functional language in the claims does not serve to impart patentability. While features of an apparatus may be recited either structurally or functional, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. Apparatus claims cover what a device is, not what a device does. A claim containing a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior apparatus teaches all the structural limitation of the claims. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d, 1429, 1431-2 (Fed. Cir. 1997); Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990); Ex parte Masham, 2 USPQ 2d 1647 (Bd. Pat. App. & Inter. 1987).

14. Regarding claim 16, as best understood, Fletch discloses the apparatus as in claim 15 wherein at least a part of the region is flexible (figures 1, 2, and 5 – 7).

15. Regarding claim 17, as best understood, Fletch discloses the apparatus as in claim 15 wherein at least a part of the region is defined by an elastically deformable material (figures 1, 2, and 5 – 7, col 2, lines 65 – 72, col 3, lines 25 – 34, col 4, lines 60 – 75, col 6, lines 45 – 53, col 6, lines 4 - 10).

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16. Regarding claim 18, as best understood, Fletcher et al., discloses the apparatus as in claim 15, comprising a multiplicity of flexible elements extending radially across the junction between the tire and rim (elements 2, 3, 6, 7, 16, 17, figures 1, 2, and 5 – 7).

**Claims 15, 23 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Ralph (US 6,149,100).**

17. Regarding claims 15, 23, and 28, as best understood, Ralph discloses retractable landing gear (figure 4) with tires and rims (figures 9 –9c) wherein a “region” exists between a junction between the tire and rim wherein the region has an outlined shaped of the surfaces of the junction between the tire and rim. It is noted, the “region” is provided with no structure details, thus the examiner is treating the region as a location at a junction. Further, it should be appreciated that the applicant’s functional language in the claims does not serve to impart patentability. While features of an apparatus may be recited either structurally or functional, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. Apparatus claims cover what a device is, not what a device does. A claim containing a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior apparatus teaches all the structural limitation of the claims. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d, 1429, 1431-.2 (Fed. Cir. 1997); Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469 ,15 USPQ2d 1525, 1528 (Fed. Cir. 1990); Ex parte Masham, 2USPQ 2d 1647 (Bd. Pat. App. & Inter. 1987).

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher et al.**

18. Regarding claim 27, Fletcher et al., discloses the apparatus as in claim 15, wherein the landing gear are suitable for jet engine aircraft with undercarriage cargo bay storage, but is silent to type/size suitable for 50 or more passengers. However, the Examiner takes official notice, it is old and well known in the art that commercial airliners are comprised of retractable landing gear with undercarriage bay storage wherein some jet engine airliners carry 50 or more passengers. Thus, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Fletcher to implement this landing gear system into an airliner that carries 50 or more passengers because it is old and well known to utilize retractable landing gear on commercial airlines.

**Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ralph as applied to claim 15 above, and further in view of Fletcher et al.**

19. Regarding claims 29 and 30, as best understood, Ralph discloses the apparatus as in claim 15, wherein the step of a manufacturing the device of as claimed in claim 15 is inherent, but fails to teach of modifying an existing design of an aircraft wheel. However Fletcher et al. discloses an apparatus (figures 1, 2 or 5 – 7) than is capable of being incorporated into an existing aircraft



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tire/rim and junction area. Thus, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the existing system of Ralph to comprise of a the apparatus of Fletcher in order to help deflect water while providing inherent noise reduction of the wheels due to the streamlining of the tires and rims the water deflector provides.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua J. Michener whose telephone number is 571-272-1467. The examiner can normally be reached on Monday through Friday 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Joshua J Michener  
Examiner  
Art Unit 3644

jjm

A handwritten signature in black ink, appearing to read 'Teri Pham Luu', with a large, stylized loop at the end.

TERI PHAM LUU  
SUPERVISORY  
PRIMARY EXAMINER